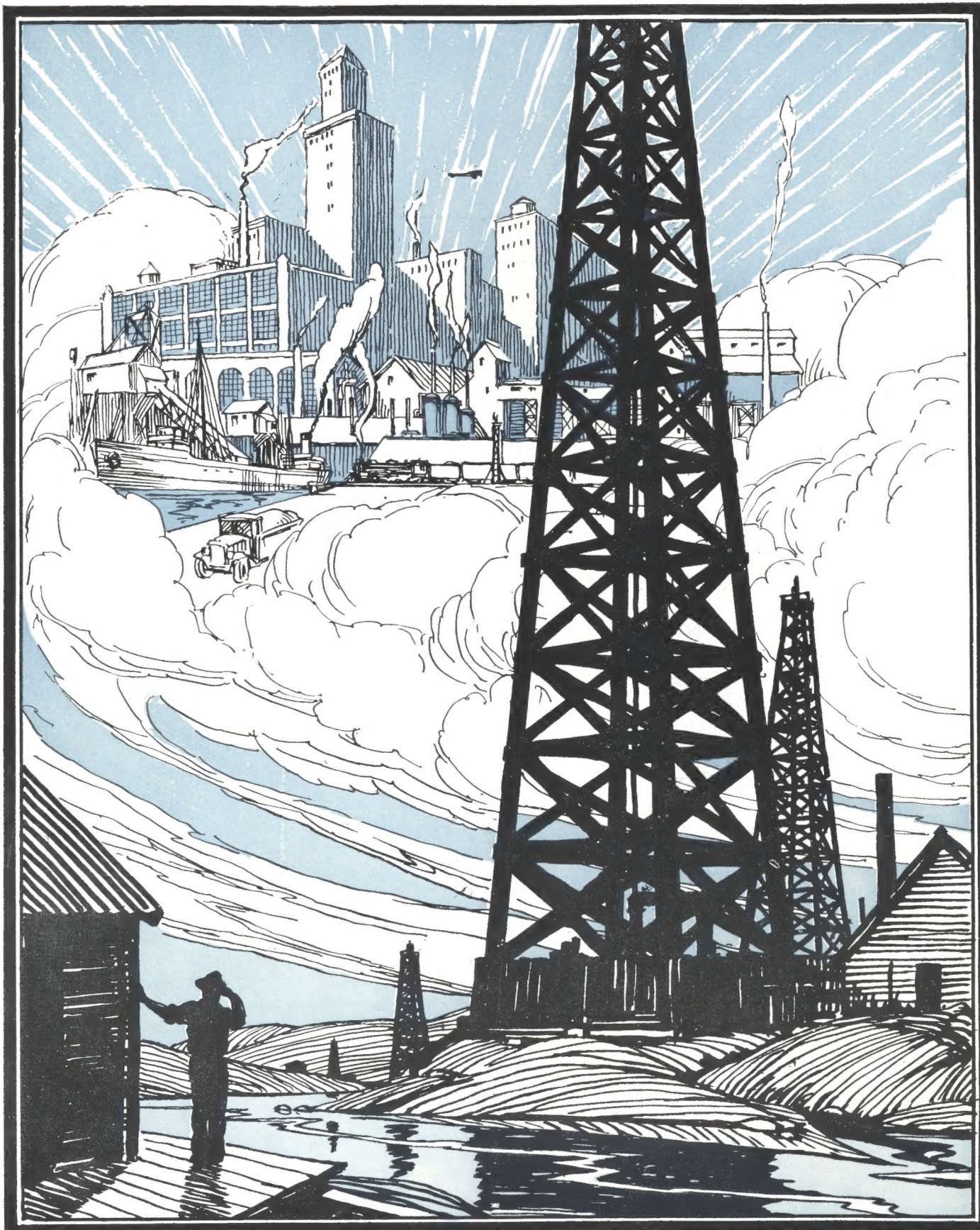


ALBERTA CRUDE OIL

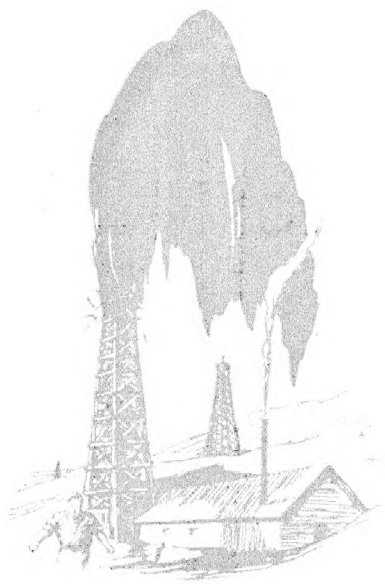
CANADA'S Opportunity



Member STANDARD STOCK EXCHANGE OF EDMONTON, LIMITED



ISSUED BY
THE LOCATORS LIMITED, EDMONTON, ALBERTA



Canada Oil-Minded

*Being a recently published article by A. Morley Grigg, Chairman of the Oil Section,
Edmonton Chamber of Commerce*

CANADA is becoming oil-minded, and rightly so. A Nation with a million automobiles, and tens of thousands of tractors and other gasoline-driven motors, spending over \$60,000,000.00 annually for the importation of gasoline, oil and oil products, is awakening to the urgent need for developing its own oil supply. This necessity is not merely to supply present needs but also to quicken the wheels of progress and hasten the day of greatly increased prosperity. The object lesson is close at hand. Our great neighbor to the south is wealthy to a degree of opulence never before equalled in the history of the world, and keen financial analysts ascribe a great portion of that wealth to the utilization of oil resources with resultant cheap power fuel and the consequent speeding up of business through the almost universal use of automobiles, motor trucks, tractors, etc. The expression "hitting on all six" is eloquent of the speed, progress, power and prosperity of America, and it is founded on OIL.



High Grade Oil Flowing from B.P. Well No. 3B, Wainwright

To any nation the development and full utilization of its natural resources is a duty incumbent on its citizens if they would keep pace with world progress, and, as oil has now in great measure superseded coal as power fuel, it is obvious that any nation possessed of this great resource, this source of modern power, has at hand one of the foundations of wealth and progress, and that to assist in its development is not only a privilege but also the duty of every patriotic citizen.

COLUMNAR SECTIONS OF PRINCIPAL OIL AREAS TURNER VALLEY

(DIAGRAM USED BY THOS. G. MADGWICK, PETROLEUM ENGINEER, DEPARTMENT OF INTERIOR, OTTAWA)
NOTICE DEPTH TO LIMESTONE AT WAINWRIGHT, 2,550 FEET

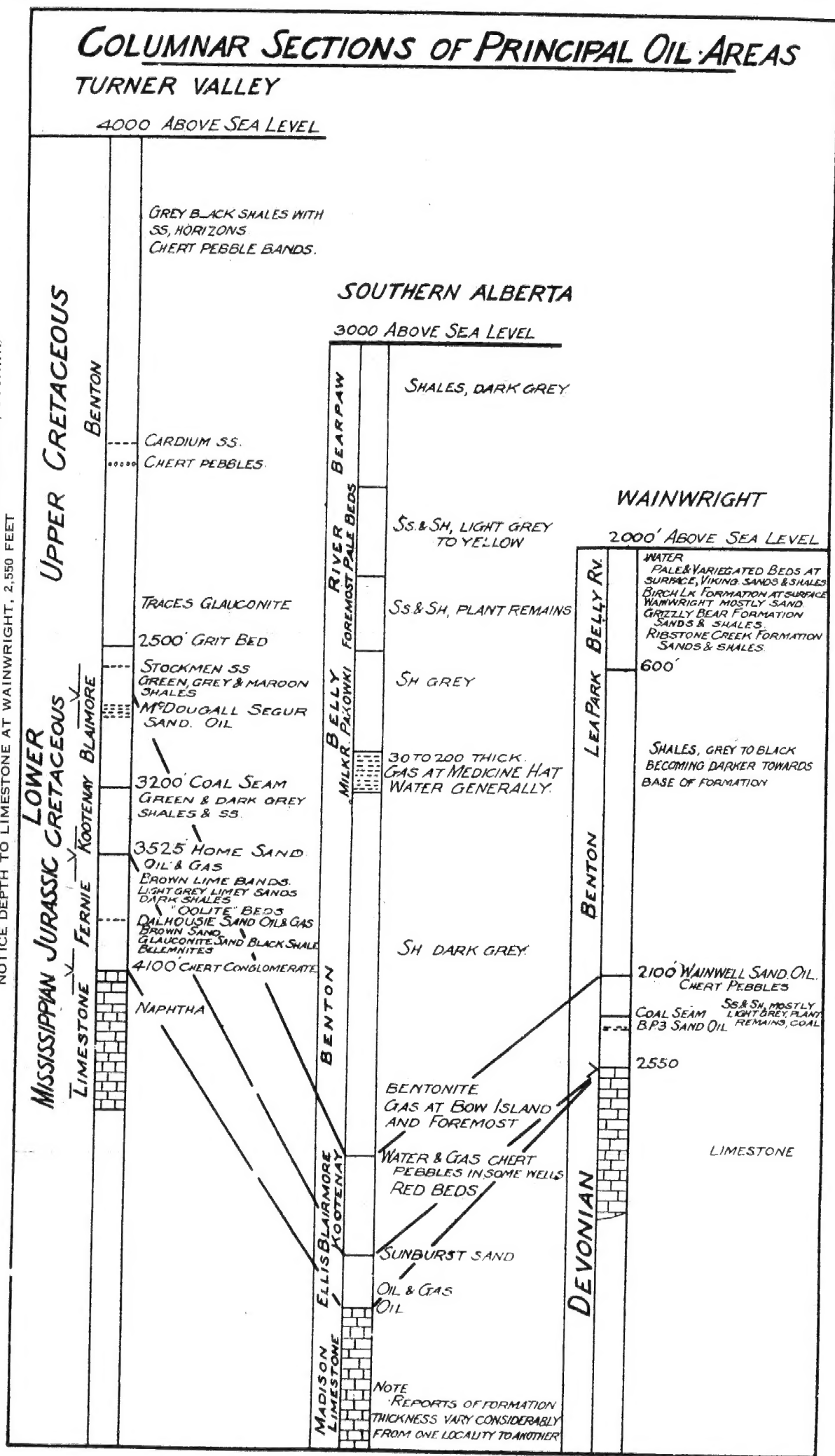


FIGURE 1.

Eminent geologists of international repute have very definitely reported that the largest undeveloped oil structures in the world are to be found in the Province of Alberta. Among the considerations impelling us to aid immediate exploration and development, the following might be mentioned.

1. A patriotic sense of duty in making Canada self-sustaining, saving a national expenditure of more than \$60,000,000.00 annually. Present production in Canada is equivalent to approximately only four days' consumption. The home market is large and increasing yearly.
2. Selfish motives—OIL has been termed "liquid gold." Let us realize on these immense riches. It has been said that the largest individual fortune in the United States was founded on oil. More large fortunes have been made in the oil industry in the United States during the past forty years than in any other branch of industry.
3. The British Empire as a whole produces only about fourteen per cent. of the requirements of the Empire. To emphasize this, it may be mentioned that Canada is at present the only oil-producing section of the Empire. It is true that oil is produced in territory under the protectorate of Britain, but in Canada we have the only British territory which is oil-producing.
4. OIL is a world POWER. Great international policies are involved in the world's search for new oil fields.
5. The abundant geological evidences of oil structures in Alberta. Experts state that thirty-five per cent. of the Continent's oil structures lies to the North of the International boundary. Dominion Government geologists estimate that in the tar sands at McMurray (north-east of Edmonton) the oil saturation has been equal to fifty billion barrels, which is said to be equivalent to the world's requirements for fifty years, and is known as the greatest oil exposure in the world.

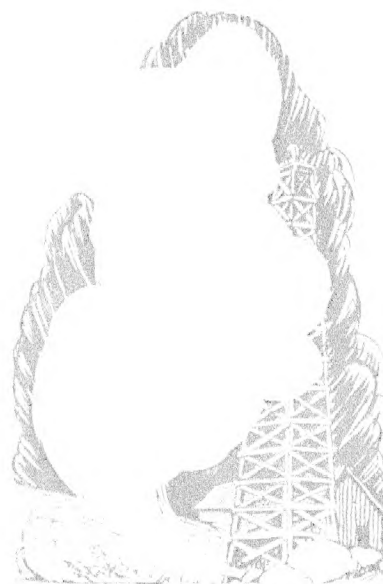
The oil prospects in Alberta are indicated in the words of an eminent oil geologist, Mr. Thomas G. Madgwick (Petroleum Engineer, Department of the Interior, Ottawa) who has said:

"Oil and gas are clearly widely distributed minerals in the West, and oil seepages have been described from the Southern boundary of Alberta to far beyond its Northern limits. In the tar sands, some 300 miles North of Edmonton, we have by far the greatest manifestations of the occurrence of oil in the world, what might be described as a vast outcrop seepage.

"The same formations which are highly productive of oil and gas South of the International boundary extend Northward without losing their potential oil and gas productive character; also, in proportion to the area over which test drilling in Western Canada has so far been carried out, neither the number of wells nor the footage drilled can be said to have taken prospecting for oil and gas in the Prairie Provinces out of its preliminary stages. What is perhaps still little appreciated is the fact that, in spite of this, the results have been extraordinarily successful, far more so than at the equivalent stage of development in many an oil-field which has since become a large producer."

Yes, Canada has reason to be oil-minded.

Serious oil development in Alberta is only two years old, and already the great naphtha-producing Turner Valley is one of the wonders of the world. There, acreage on structure is valued and traded at thousands of dollars per acre, and wells are drilled to depths of over a mile at costs varying from \$75,000.00 to \$150,000.00 and up. Nearly 200,000,000 cubic feet of gas is going to waste every day in the Turner Valley with the production of naphtha. This naphtha which sells at \$4.00 per barrel as produced is a gasoline of higher grade than can be used as fuel and must, therefore, be blended with lower grade crude. But naphtha, which is usually recovered as a by-product of oil, does not and can not, no matter in what quantity, supply the oil needs of a nation. If we should devote our attention only to the production of naphtha, then



would we be forced to continue to derive a vast oil supply from Peru, Colombia, and other foreign countries with growing profits to the importing companies, coincident with great and growing losses to Canadian pocketbooks.

Canada needs crude oil—oils which under the usual distillation and cracking processes yield the following general common known products:

NAPHTHAS
GASOLINE AND KEROSENE
LUBRICANTS
PARAFFIN WAX AND PETROLATUM
FUEL OILS
PETROLEUM ASPHALTS

From such crude oil there are derived also the innumerable by-products and derivatives which fall roughly into the following classifications:

INSULATING OILS
PAINTERS' NAPHTHAS
PHARMACEUTICAL OILS
LIQUID PETROLATUMS
INSECTICIDE OILS
CUTTING OILS
SULFONIC ACIDS
PETROLEUM COKE
AROMATIC HYDROCARBONS AND DERIVATIVES
NAPHTHENIC ACIDS
CARBON BLACK
HYDROGEN
OLEFIN DERIVATIVES
CHLORINATED PETROLEUM FRACTIONS
FORMALDEHYDE
OZONIDES
ALDEHYDES AND ACIDS
FATTY ACIDS

Why did "The Financial World" (New York) in a recent issue refer to the Standard Oil Company, of New Jersey, (parent Company of Imperial Oil Company of Canada, Limited) as a Chemical Giant? Because the Company is entitled to classification as a chemical company not only because of its primary operations in the refining branch of the oil industry, but also by virtue of the many derivatives, including products in the proprietary drug field which are being made and sold by its subsidiaries.

Canada must develop the Alberta Crude Oil pools if she would become self-sustaining in lubricants, fuel oils, and the tremendous list of by-products, for all of which our trade balance now suffers a loss exceeding sixty millions of dollars annually. So long as attention is in a large degree diverted from energetic search for and active development of Alberta CRUDE oil,—so long as we must import oil, oil lubricants, and oil by-products, just so long will our national progress in measure be impeded. Therefore the search is on to locate and prove the great Crude Oil Pool in Alberta. The quest is for crude in quantity, rich in lubricants and the other oil by-products as well gasoline content.

CRUDE OIL DEVELOPMENT IN WAINWRIGHT

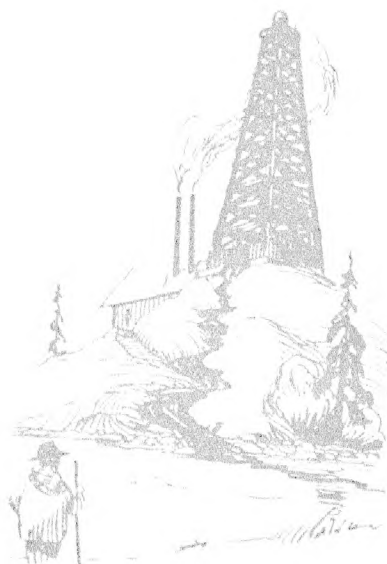
In point of development work the Birch Lake-Fabyan-Wainwright field is second only to Turner Valley. This field is some one hundred and thirty miles East of Edmonton, and is longitudinally directly South of the great McMurray Oil exposure. Here several folds or anticlines have been definitely defined, the axis running North-westerly to South-easterly with structure rising North of the Battle River. At Wainwright a rich heavy crude is found at depths of around 2,300 feet, attainable on drilling costs of approximately \$25,000. Considerable drilling is in progress over a wide area and many of these wells will be drilled to the lower oil strata under the recommendation of well-known geologists, who predict the "bringing-in" of heavy producers of high grade commercial crude. A geologist of international reputation has advised that there are three probable oil sands, and possibly a fourth, below drilling depths so far attained, and geologists are in accord in recommending deeper drilling to tap these lower strata where the great Alberta Oil Pool may be found with the prospect of heavy pressure ensuring wells of tremendous production of light crude.

Concerning the value of Wainwright crude, which has been produced from the upper or shallower oil sands, we may well quote from the report of the Scientific and Industrial Research Council of Alberta, under the chairmanship of Dr. H. M. Tory, formerly President of the University of Alberta, and now Chairman of the Industrial Research Council of Canada. On page 9 of that report the Universal Produce Company is quoted as saying of the Wainwright crude oils it had tested:

"That the cracked gasoline has very high anti-knock properties, being equivalent to the cracked gasoline from our Smackover crude in that respect. This cracked gasoline is the equivalent in anti-knock properties of any gasoline which is now being produced commercially in any part of the world. Stated in terms of a Mid-Continent gasoline and benzol mixture, the cracked gasoline from the Wainwright crude is equal to a Mid-Continent straight run gasoline, containing in a mixture therewith, 28% of commercial benzol."

The obtaining of such valuable oil at depths of around 2,300 feet is ample justification for extensive development, and when coupled with expert geological advice that deeper drilling will "bring in" big production of higher gravity oil, this area must be recognized as a major structure of vast potentialities.

The accompanying diagram (figure 1) is a copy of a drawing used by Thomas G. Madgwick (Petroleum Engineer, Department of the Interior, Ottawa), when addressing the annual meeting of The Canadian Institute of Mining and Metallurgy at Winnipeg in March, 1929, on the subject "The Oil and Gas Situation in the Prairie Provinces." For our purpose this drawing serves to illustrate very forcefully the great advantages of oil structures in the Wainwright and tributary districts with respect to shallower and consequently less expensive drilling. Impressive and noteworthy is the fact that at Wainwright the limestone is found at a depth of just 2,550 feet and still more remarkable is the fact that, almost without exception, past drilling has not been carried to the lime, and in no case has there been, as yet, any earnest attempt to drill to production in the limestone. Earlier drilling here was neither properly financed nor competently directed, but with the present new era of development by well-sponsored companies, protected by ample finances and proven experienced drillers, the great potentialities are now assured of thorough testing in the several underlying oil strata. The oil-folds or structures in this field are of wide expanse, and the possibilities in this area are immense. Drilling of more than thirty wells has been arranged and a large development is already under way. Success here or there means a continent-wide stampede that will surpass anything of the kind seen in many a day. "Yet," in the words of the great Eastern Canadian Editor, Mr. Sidney Norman:



"It is doubtful if one per cent. of ten million people, outside of the immediate oil-producing districts, have the slightest conception of what it is all about.

"Canada, as a nation, could well afford to transport a few thousand of her leading bankers and business men to the scene, that they might come back to the more or less effete spheres of their influence to 'tell the world.'

"No matter how busy a Canadian may be, no matter how far removed his particular business may be from petroleum, he is nevertheless vitally interested in the present developments in Alberta and elsewhere. The fact should be driven home with a sledge-hammer."

We further quote from a writing by Frank A. Skelthorne:

"Five hundred millions of dollars will be required to develop the oil resources of Alberta. A lot of this will come from production, but the striking of crude oil will mean, pipe lines, refineries, tank farms, tank cars and factories to handle the by-products.

"All these things take money and lots of it, but the funds invested will be returned a hundred fold."



Delegates from the Mining and Metallurgical Congress at a Wainwright Oil Pool

Some twenty years ago oil development in the State of California had progressed to a stage comparable only to the present stage of development in the Province of Alberta. In the intervening years that development has increased to a point where the "liquid gold" oil resources of California yield a revenue of approximately \$200,000,000.00 annually, a figure exceeding the value of Alberta's annual wheat production.

The development of our tremendous potential crude oil reservoirs is in but the merest infant stage. The handwriting is on the wall. Shall we of our generation reap our share of this storehouse of wealth, or will it be said that we neglected our heritage? Certainly in the years to come Alberta's oil development "will be so vast as to hold the attention and interest of the whole British Empire,—indeed in the eyes of the world."

Canada has need to be Oil-Minded!

CUMMINGS LAKE VALLEY OIL STRUCTURE

An Especially Attractive Offering

WITH respect to the great oil potentialities of the Wainwright and tributary districts, possibly the most interesting of the defined folds or anticlines is found in the Cummings Lake Valley structure, the location of which is mentioned by Dr. G. S. Hume in a recent report to the Department of the Interior.

EXTRACT FROM SUMMARY REPORT OF DR. G. S. HUME ON "THE
WAINWRIGHT AREA"

Other Folds Located by Reconnaissance Study

Outside the area in which accurate levelling was done, a number of folds were located, but their extent is not known. It is believed that an anticlinal fold exists between the mouth of Buffalo Coulee and the mouth of Grizzly Bear Coulee on Battle River, but as far as present data indicate, this fold is in the nature of a broad upward rather than a sharp anticline. The data on which this belief is based are as follows:

(1) An outcrop of Birch Lake sandstone at an elevation of approximately 2,100 feet on the Vermilion-Wainwright trail on the north side of Battle River near the line between Townships 46 and 47, Range 6, West 4th Meridian.

(2) An outcrop of Birch Lake sandstone in a quarry on Mr. Patterson's farm, N.W. $\frac{1}{4}$ Section 24, Township 47, Range 6, West of 4th Meridian, at an elevation of approximately 2,150 feet.

(3) An outcrop of Ribstone Creek sandstone on Battle River near the mouth of Grizzly Bear Coulee at an elevation of approximately 1,850 feet.

Thus between outcrops Nos. 1 and 2 there is a south-west dip of about 50 feet, and between outcrops Nos. 2 and 3 there is a north-east dip of about 70 feet. In this last calculation it is considered that the Ribstone Creek hard sandstone beds are separated from the hard sandstones of the Birch Lake formation by 230 feet. These elevations indicate a fold. This fold may extend north-west, for at Cummings school, S.E. $\frac{1}{4}$ Section 10, Township 48, Range 7, West 4th Meridian, hard beds of sandstone are reported to have been penetrated in a well drilled for water, the beds being found 10 feet below the surface or at an approximate elevation of 2,090 feet. These beds are considered to be Birch Lake sandstones, and if they belong to the same horizon as those that outcrop to the south-west on Buffalo coulee, a south-west dip of 60 feet in 6 or 7 miles is indicated. There are no outcrops to the north-east of Cummings which could serve to indicate the dip from Cummings north-eastwards."

The Cummings Lake Valley structure, by geological survey, has been delimited to some 20 miles long and from 6 to 8 miles wide. The evidences gained by careful levelling and by use of such recognized markers as the Birch Lake sandstones, and also the sandstones of Buffalo Coulee and Grizzly Bear Coulee, lying respectively to the west and east of this fold, clearly indicate that this fold or anticline is exceptionally high stratigraphically, and, due to the process of erosion, is low topographically. This condition would, for development purposes, indicate the ideal oil structure, particularly as a perfect closure is shown. More than 20,000 acres of Government leasehold (now the property of the Cummings Lake Oils, Limited) comprise the blanketing of this particularly promising area. The leasehold was secured after having obtained geological opinion and report advising that:

- (1) In this field all strata above the Ribstone Creek sandstone have been eroded by glacial action except outlying flanks.
- (2) A portion of the Ribstone Creek sandstone has also been

eroded, leaving about 176 feet, and making the estimated depth to oil bearing sands in the Lower Cretaceous approximately 1,850 feet.

- (3) The structure is higher here than south of the Battle River, and this fact, combined with exceptional conditions with regard to area of drainage basin, and the evidence of an oil enclosure, should ensure large productions of higher gravity petroleum.
- (4) Drilling depth to limestone may be estimated as 2,200 feet.

As already indicated, this very clearly defined and valuable structure is owned and controlled by The Cummings Lake Oils, Limited.

LOCATION AND MARKETING FACILITIES

THE district is especially fortunate in location with respect to the prospective marketing of its petroleum production. The Canadian Pacific Railway has already built a branch line westerly from the Saskatchewan boundary reaching a point near Paradise Valley in Township 47, Range 2, and in the further extension of this railway it is anticipated that in arranging to serve the area lying north of the Battle River and south of the Canadian National Railway through Vermilion, this railway branch will be constructed on a line extending through the centre of this oil structure. The great value of economical marketing seems, therefore, definitely assured and this feature greatly enhances the value of this property and will further facilitate immediate development.

DEVELOPMENT

THE Cummings Lake Oils, Limited, does not propose to operate as a drilling company but is arranging to sub-lease the petroleum and natural gas rights to companies, subject to drilling obligations, with a reasonable cash consideration and royalties.

By a fortunate agreement we are now privileged to act as exclusive agents for the company in receiving offers for drilling rights on their acreage in blocks. The unusually prominent characteristics of this Cummings Lake Valley Oil structure will ensure immediate recognition and we, therefore, suggest to clients that application for acreage be made without delay.

Further details concerning the above gladly furnished upon request.

We are specialists in selected acreage on structure in the Birch Lake-Fabyan, Cummings Lake-Wainwright areas, and can deliver in small parcels or blocks of thousands of acres.

CORRESPONDENCE SOLICITED

THE LOCATORS, LIMITED

N. C. LEGGE, Manager

Edmonton, Alberta

10159 100A St.

Member Standard Stock Exchange of Edmonton, Limited
Bankers: The Canadian Bank of Commerce, Main Office

General Brokerage Business Transacted

*Large size Oil Field Maps (showing legal sub-divisions)
of the Birch Lake-Fabyan, Cummings Lake-Wainwright
districts may be obtained from us at \$2.50 each, postpaid.*

1929

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